

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

In the specification, paragraphs 0020 and 0021 have been amended on page 7. Paragraph 0020 was amended to reflect the perspective exploded view shown in the new formal Figure 3 submitted herewith. Paragraph 0021 was amended to indicate that Figure 4 shows the coil temperature sensor 26, not the oven (cooking chamber) temperature sensor 29. No new matter has been entered, since the Figure 4 originally filed with the application shows the coil temperature sensor 26.

No claims are requested to be cancelled. Claims 1, 15, 16, and 17 are currently being amended. Claims 24-29 are being added. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. After entry of the above amendments, Claims 1-29 are pending in this application.

The Examiner's determination that Claims 7-10, 15, and 16 would be allowable if rewritten in independent form is noted with appreciation. Claims 7, 9, 15, and 16 have been rewritten in independent form as new claims 24, 26, 28, and 29 respectively including all the limitations of the base and intervening claims from which former Claims 7, 9, 15, and 16 directly or indirectly depended. Claims 8 and 10 have been rewritten as new dependent claims 25 and 27 which depend from new independent claims 24 and 26 respectively. Applicant notes that method Claims 15 and 16 as originally filed depended from Claim 10, which is an obvious typographical error since Claim 10 is an apparatus claim. Claims 15 and 16 should have depended from Claim 11. Applicant respectfully requests that the Examiner confirm that the Examiner's determination of allowability of Claims 15 and 16 was based on an assumption that those Claims 15 and 16 depended from Claim 11 not Claim 10.

In the Office Action of July 1, 2004, Claim 1 was rejected under 35 U.S.C. § 102 as anticipated by U.S. Pat. No. 5,466,912 to Dornbush, et al. (“Dornbush”), which is a reference that was cited by Applicant in an Information Disclosure Statement submitted on January 22, 2004. Reconsideration of the rejection of Claim 1, as amended, as being anticipated by Dornbush is respectfully requested for the reasons discussed below.

Claim 1 has been amended to more particularly identify applicant’s invention as requiring “an open coil heating element positioned around the fan such that a substantial portion of the radial airflow passes through the open coil heating element.” While the convection oven of Dornbush includes elements that bear a superficial resemblance to Applicant’s invention, it is respectfully submitted that Dornbush does not teach all of the limitations of Claim 1 as amended.

First, the portion of Dornbush cited in the Office Action describes a first air circulation and a second air circulation. The second air circulation is the air circulation path that provides heating. Dornbush (col. 6, lines 41-48) teaches that “*The second air circulation passes a small portion of air over the heated coils in the heater. In other words, the small air current exits radially outwardly from the fan 56, reverses direction 180 degrees to be drawn in over the coil, then radially inwardly to the center of the heater, then downwardly into the center zone of the blade 56. This configuration provides the following advantage: most particles are unable to make the abrupt 180 degree change in direction that the air drawn through the heater does.*” (emphasis added). Only a small portion of the radial airflow in Dornbush passes through the open coil heating element, so Dornbush does not teach the “open coil heating element positioned around the fan such that a substantial portion of the radial airflow passes through the open coil heating element” required by Claim 1 as amended.

Second, it is noted that although the open coil heating element and the radial fan of Dornbush are coaxial, they are not coplanar. As shown in Fig. 13 of Dornbush, the open coil heating element 57 of Dornbush lies in a plane that is offset from the plane of the hot air fan 56 of Dornbush. This is why only a small portion of the radial air flow from the hot air fan of Dornbush passes through the open coil heating element of Dornbush. Thus, Dornbush also does

not teach the “open coil heating element positioned around the fan such that a substantial portion of the radial airflow passes through the open coil heating element” required by Claim 1 as amended.

Further, it is respectfully submitted that Dornbush teaches away from Applicant’s invention of Claim 1 as amended. Dornbush (col. 6, lines 48-55) teaches that the small portion of the radial air flow from the hot air fan of Dornbush passing through the open coil heating element of Dornbush is advantageous, in particular that “*the air traveling through the heater assembly is virtually free of contamination, while most particles are thrown off to the sides and bottom of the cooking chamber, where they can easily be cleaned away. As a result of the above, the heater does not accumulate food, oil or grease, thereby eliminating the need to clean the heater, extending heater element life and preventing smoke or fire hazard.*” This contrasts with applicant’s invention, which maximizes air flow through the open coil heating element (see paragraph 0011 of the present application).

In light of the foregoing reasons, reconsideration of the rejection of Claim 1, as amended, under 35 U.S.C. § 102 as being anticipated by Dornbush is respectfully requested. Claims 2-9 depend directly or indirectly from Claim 1 and incorporate the features thereof, so those claims should also be allowable over Dornbush.

In the Office Action of July 1, 2004, Claim 11 was also rejected under 35 U.S.C. § 102 as anticipated by U.S. Pat. No. 5,466,912 to Dornbush, et al. (“Dornbush”), which is a reference that was cited by Applicant in an Information Disclosure Statement submitted on January 22, 2004. Reconsideration of the rejection of Claim 11 as being anticipated by Dornbush is respectfully requested for the reasons discussed below.

Claim 11 requires “an open coil heating element formed around the fan ... wherein at least half of the radial airflow passes through the open coil heating element.” As discussed in the context of Claim 1 above, only a small portion of the radial airflow in Dornbush passes through the open coil heating element, so Dornbush does not teach the “an open coil heating element

formed around the fan ... wherein at least half of the radial airflow passes through the open coil heating element” required by Claim 11.

Second, as discussed in the context of Claim 1 above, the open coil heating element and the radial fan of Dornbush are not coplanar, which is why only a small portion of the radial air flow from the hot air fan of Dornbush passes through the open coil heating element of Dornbush. Thus, Dornbush also does not teach the “an open coil heating element formed around the fan ... wherein at least half of the radial airflow passes through the open coil heating element” required by Claim 11.

Further, it is respectfully submitted that Dornbush teaches away from Applicant’s invention of Claim 11. As discussed in the context of Claim 1 above, Dornbush teaches that the small portion of the radial air flow from the hot air fan of Dornbush passing through the open coil heating element of Dornbush is advantageous, in contrast to applicant’s invention which maximizes air flow through the open coil heating element (see paragraph 0011 of the present application).

In light of the foregoing reasons, reconsideration of the rejection of Claim 11 under 35 U.S.C. § 102 as being anticipated by Dornbush is respectfully requested. Claims 12-16 depend directly or indirectly from Claim 11 and incorporate the features thereof, so those claims should also be allowable over Dornbush.

In the Office Action of January 23, 2004, Claims 1-6, 11-14, and 17-21 were rejected as being unpatentable under 35 U.S.C. § 103(a) over U.S. Pat. No. 4,771,163 to Thiboutot (“Thiboutot”) in view of U.S. Pat. No. 3,783,832 to Marsh (“Marsh”). However, applicant respectfully submits that the combination of the Thiboutot and Marsh references does not establish a prima facie case of obviousness of Claims 1-6, 11-14, and 17-21 for at least four reasons.

First, it is respectfully submitted that Marsh is not analogous prior art to the field of applicant's invention. Marsh is an egg incubator which requires relatively low temperatures and relatively low airflow. The field of Marsh, egg incubators, is clearly not the same field of endeavor as the field of applicants invention, which is cooking appliances.

Further, not only is Marsh in a different field of endeavor, it is respectfully submitted that Hankey is not reasonably pertinent to the particular problems with which applicant's invention is concerned. Applicant's invention addresses particular needs associated with cooking appliances, for example providing highly precise temperatures, very fast warm up and cool-down times, and self-protecting operation in the presence of fan or other component failure. The device of Marsh is intended to maintain temperatures of about 100 degrees Fahrenheit over long periods of time, and does not need very fast warm up or cool-down performance. The device of Marsh also operates at relatively low temperatures, wherein catastrophic failure of heating elements is very unlikely if the fan stops working. The device of Marsh is intended to maintain steady temperature, proper humidity, and to turn incubated eggs at regular intervals.

Because the above-described problems associated with cooking appliances do not appear in the field of egg incubators, it is respectfully submitted that the field of egg incubators would not have logically commended itself to an inventor seeking solutions to problems in the field of cooking appliances. Thus, Marsh is not in the field of applicant's invention, nor is Marsh reasonably pertinent to applicant's invention. For these reasons, it is respectfully submitted that Marsh does not constitute analogous prior art, and the rejection of Claims 1-6, 11-14, and 17-21 under 35 U.S.C. §103(a) over the combination of Thiboutot and Marsh is therefore improper.

Second, it is respectfully submitted that the Office Action has not identified any suggestion or motivation to combine the Thiboutot device with features of the Marsh device to form applicant's invention of Claims 1-6, 11-14, and 17-21, where the suggestion or motivation to combine is found in the prior art and not as a result of impermissible hindsight using applicant's disclosure. Thus, even hypothetically assuming that Marsh would constitute

analogous prior art that could properly be combined with Thiboutot, that combination would still be improper.

The Office Action states that “It would have been obvious to adapt the coil heater of (Marsh) to the oven of (Thiboutot) since open coil heaters are known to enhance efficiency of heat transfer to the air in convection-heated devices.” However, it is not seen that the Office Action has shown that any such motivation to modify the oven of Thiboutot with the open coil heater of Marsh is taught *by the prior art* and not as a result of impermissible hindsight using applicant’s disclosure.

Third, it is respectfully submitted that combining the Thiboutot oven with the open coil heater of Marsh would render the oven of Thiboutot unsuitable for its intended purpose, so there would be no suggestion or modification to make the proposed modification. In re Gordoni, 733 F.2d 900 (Fed. Cir. 1984). Because the device of Marsh is an egg incubator, it includes an open coil heater able to maintain uniform temperature of about 100 degrees Fahrenheit for long periods of time. Ovens, such as that of Thiboutot, need considerably higher temperatures to work, and adding an open coil heater from an egg incubator would render the oven of Thiboutot unsuitable for baking.

Fourth, it is respectfully submitted that there is no showing that the combination of Thiboutot and Marsh would teach all of the limitations of independent Claims 1 (as amended), 11, and 17 (as amended). Claim 1, as amended, requires “an open coil heating element positioned around the fan such that a substantial portion of the radial airflow passes through the open coil heating element.” Claim 11 requires “an open coil heating element formed around the fan ... wherein at least half of the radial airflow passes through the open coil heating element.” Claim 17, as amended, requires “an open coil heating element ... formed around the fan whereby a substantial portion of the radial airflow passes through the open coil heating element.” As shown in Fig. 1 of Marsh, the open coil heating element 60 of Marsh is sufficiently distant from the fan 56 of Marsh that it can be fairly stated that very little, if any, radial airflow from the fan 65 of Marsh passes through the open coil heating element 60 of Marsh.

Claims 2-10 depend directly or indirectly from Claim 1 and incorporate the features thereof, so reconsideration of the rejection of Claims 1-10 under §103(a) is respectfully requested in light of the foregoing discussion of Thiboutot and Marsh with respect to Claim 1. Claims 12-16 depend directly or indirectly from Claim 11 and incorporate the features thereof, so reconsideration of the rejection of Claims 12-16 under §103(a) is also respectfully requested. Claims 18-23 depend directly or indirectly from Claim 17 and incorporate the features thereof, so reconsideration of the rejection of Claims 18-23 under §103(a) is also respectfully requested.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2350. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2350. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2350.

Respectfully submitted,



By _____

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Amendments to the Drawings:

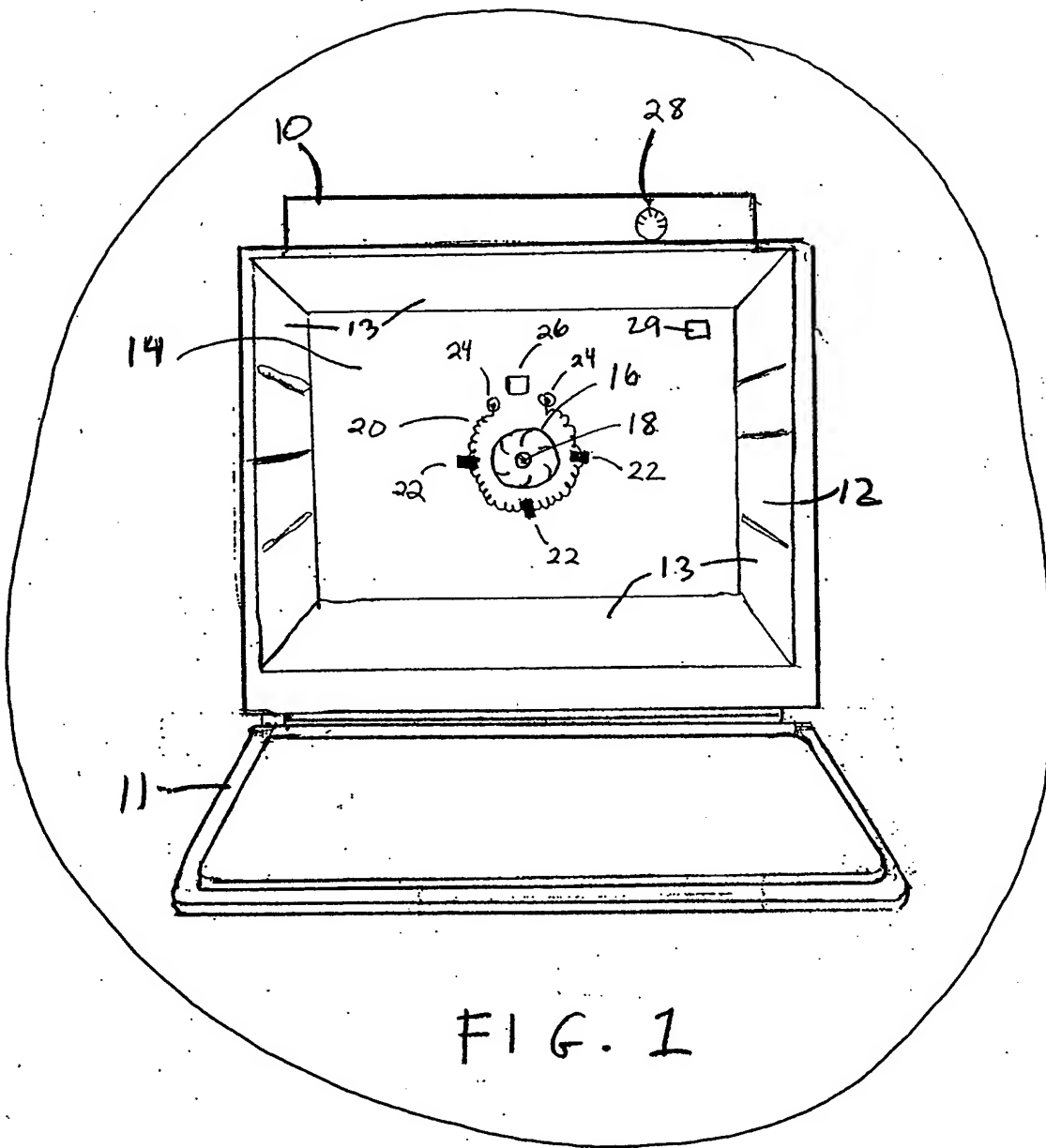
The drawing sheets attached in connection with the above-identified application containing Figure(s) 1-4 are being presented as new formal drawing s to be substituted for the previously submitted drawing sheet or sheets that were objected to by the Examiner. Figure 3 has been amended to provide a perspective exploded view. Appended to this amendment is an annotated copy of the previous drawing sheets which have been marked to show changes presented in the replacement sheets.

The specific changes which have been made to the new formal drawing Figure 1 are to clean up and clarify the front view of a convection oven with the oven door open (to show an exemplary open coil heating element according to the invention) that was shown in the Figure 1 previously submitted.

The specific changes which have been made to the new formal drawing Figure 2 are to clean up and clarify the schematic side view block diagram of an exemplary open coil heating element and fan according to the invention that was shown in the Figure 2 previously submitted.

The specific changes which have been made to the new formal drawing Figure 3 are to provide a perspective exploded view of an exemplary open coil heating element and fan according to the invention instead of the fragmentary perspective view that was shown in the Figure 3 previously submitted.

The specific changes which have been made to the new formal drawing Figure 4 are to clean up and clarify the fragmentary perspective view of an exemplary coil temperature sensor for use with an exemplary open coil heating element and fan according to the invention that was shown in the Figure 4 previously submitted.



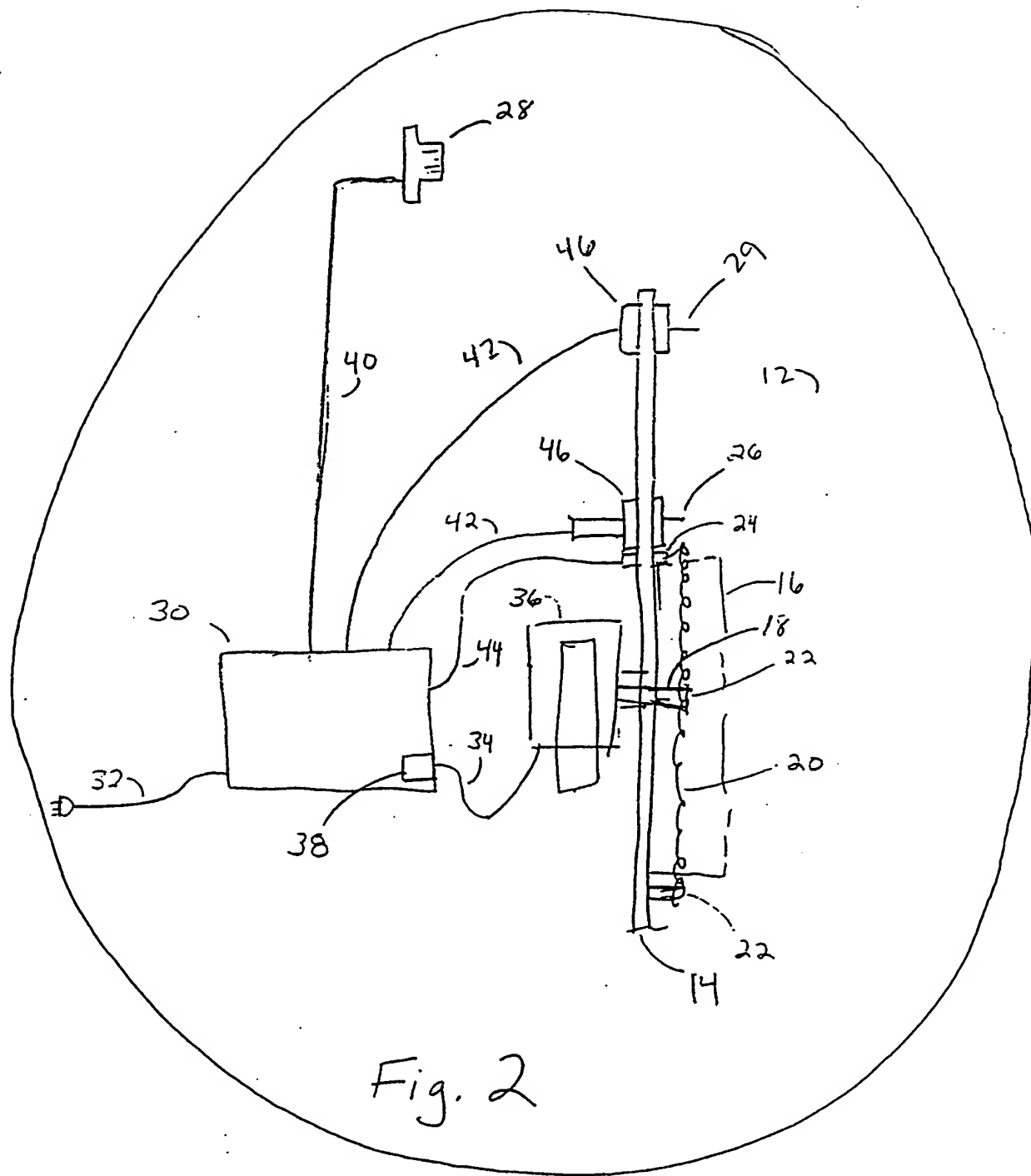


Fig. 2

